IDENTIFYING MEDICAL PROFESSIONALS WHO ARE A TURNOVER RISK

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INTRODUCTION

- Turnover is very expensive and disruptive to any organization

- A supportive organizational culture could help reduce the risk of turnover

- Many organizations currently use survey results to identify causes of turnover and at-risk employees

METHODOLOGY

- 1,5560 survey responses from NYC medical professionals with 37 features and one label indicating the level of turnover risk.

- One labeled variable indicates turnover risk (Q58)

- 75/25 training/ test split

- Eliminated responses with 3 or more missing values, or missing value for turnover risk variable

- K nearest neighbors to input all other missing values

METHODOLOGY

- Models tried: Random forest, multinomial logistic regression, J48 decision tree, SVM

- Random forest gave the best overall performance; tuned parameters mtry and ntree

RESULTS

- AUC: .7776

- Accuracy: .653

- Kappa: .465

IMPORTANCE

- Using predictive analytics to help predict employee turnover could help organizations detect employees who are a potential flight risk
    - Allows for organizations to take pre-emptive actions to retain those employees, especially employees who are deemed critical
- In the long run, the business impact:
    - Lower training and recruitment cost
    - Enhance employee engagement
    - Enhanced employer brand